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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/784,133	02/16/2001	Kazuya Kusumoto	1586.1001	2140

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EXAMINER	
STIMPAK, JOHNNA	

ART UNIT	PAPER NUMBER
3623	

DATE MAILED: 01/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/784,133	KUSUMOTO, KAZUYA	
	Examiner	Art Unit	
	Johnna R Stimpak	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 February 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ ~~Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)~~ Paper No(s)/Mail Date *2/16/01*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ ~~Notice of Informal Patent Application (PTO-152)~~
6) ☒ Other: *Requirement for Information*.

DETAILED ACTION

1. The following is a first office action upon examination of application number 09/784,133.

Claims 1-17 are pending and have been examined on the merits discussed below.

Specification

2. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
(e) BACKGROUND OF THE INVENTION.
(1) Field of the Invention.
(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(f) BRIEF SUMMARY OF THE INVENTION.
(g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(h) DETAILED DESCRIPTION OF THE INVENTION.
(i) CLAIM OR CLAIMS (commencing on a separate sheet).
(j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Content of Specification

(a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.

(b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.

(c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.

(d) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.

(e) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:

(1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."

(2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."

(f) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the

invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

(g) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.

(h) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

(i) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).

(j) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).

(k) Sequence Listing, See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

3. The disclosure is objected to because of the following informalities: The listing of claims in the on pages 4-10 of the Summary of the Invention is not acceptable. Please see section (f) under Content of Specification above. On pages 12-17 of the Summary of the Invention, a detailed description of the invention is explained by referencing the figures. This is also not acceptable. The reference to figures should be included in the Detailed Description of the Invention. Please see section (h) under Content of Specification.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-11 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of:

(1) whether the invention is within the technological arts; and

(2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For a process claim to

pass muster, the recited process must somehow apply, involve, use, or advance the technological arts.

In the present case, claims 1-11 only recite an abstract idea. The recited steps of evaluating the proximity of a brand and/or vehicle using factor analysis does not apply, involve, user or advance the technological arts since all of the recited steps may be performed manually with or without the aid of technology.

Additionally, for a claimed invention to be statutory, the claimed invention must produce a useful, concrete, and tangible result. In the present case, the claimed invention produces a value distance between a brand and/or vehicle and another brand and/or vehicle (i.e., repeatable, useful and tangible).

Although the recited process produces a useful, concrete, and tangible result, since the claimed invention, as a whole, is not within the technological arts as explained above, claims 1-11 are deemed to be directed to non-statutory subject matter.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 2, and 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pinnell, "Techniques for Perceptual Mapping".

As per **claim 1**, Pinnell teaches factor analysis is used to summarize and combine attributes of a brand based on correlations of the attributes. The factor analysis is used to construct maps. The attribute importance is factor analyzed and then factor scores are created for each product. Although Pinnell does not explicitly teach the mathematical representation claimed here, i.e., evaluating the proximity of a brand through the magnitude of the angle θ formed by the vectors thereof, in a coordinate system in which a plurality of factors are respectively taken to be axes with the origin taken to the be the factor score = 0, and the factor score of each brand and/or each vehicle for each factor is expressed as a distance from the origin along the factor axis. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a mathematical representation of the factor score determined from the factor analysis, as it is well known that a mathematical representation of brand evaluation is old and well known in the art of market analysis. The mathematical representation would allow for an better understanding of how each brand relates to each other based on the position from the vector axis.

As per **claim 2**, Pinnell does not explicitly teach evaluation of the mutual proximity by means of the magnitude of the angle θ made by the vectors and their mutual distance. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a mathematical representation of the factor score determined from the factor analysis, as it is well known that a mathematical representation of brand evaluation is old and well known in the art of market analysis. The mathematical representation would allow for an better understanding of how each brand relates to each other based on the position from the vector axis.

As per **claim 10**, Pinnell teaches factor analysis is used to summarize and combine attributes of a brand based on correlations of the attributes. The factor analysis is used to construct maps. The attribute importance is factor analyzed and then factor scores are created for each product. Although Pinnell does not explicitly teach evaluation of the mutual proximity between brands or between vehicles through the magnitude of the angle formed by factor scores and a factor axis, in a coordinate system in which a plurality of factors are respectively taken to be axes with the origin taken to be the factor score = 0, and the factor score of each brand and/or each vehicle for each factor is expressed as a distance from the origin along the factor axis. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a mathematical representation of the factor score determined from the factor analysis, as it is well known that a mathematical representation of brand evaluation is old and well known in the art of market analysis. The mathematical representation would allow for an better understanding of how each brand relates to each other based on the position from the vector axis.

As per **claim 11**, Pinnell does not explicitly teach the evaluation of proximity by means of the magnitude of the angle made by factor scores and a factor axis, and the distance between factor scores and the origin. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a mathematical representation of the factor score determined from the factor analysis, as it is well known that a mathematical representation of brand evaluation is old and well known in the art of market analysis. The mathematical representation would allow for an better understanding of how each brand relates to each other based on the position from the vector axis.

As per **claim 12**, Pinnell teaches factor analysis is used to summarize and combine attributes of a brand based on correlations of the attributes. The factor analysis is used to construct maps. The attribute importance is factor analyzed and then factor scores are created for each product. Although Pinnell does not explicitly teach means for determining factor scores of each brand and/or vehicle for each factor of the plural factors, and, in a coordinate system in which the plural factors are taken to be axes with the origin taken to be the factor score = 0, and the factor score of each brand and/or vehicle for each factor is expressed as a distance from the origin along the factor axis, means for generation of the angles of vectors formed between coordinate points determined by the factor scores of each brand and/or each vehicle. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a mathematical representation of the factor score determined from the factor analysis, as it is well known that a mathematical representation of brand evaluation is old and well known in the art of market analysis. The mathematical representation would allow for an better understanding of how each brand relates to each other based on the position from the vector axis.

It was also known at the time of the invention that merely providing an automatic means to replace a manual activity which accomplishes the same result is not sufficient to distinguish over the prior art, *In re Venner*, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958). For example, simply automating the steps of determining factor scores of each brand and /or vehicle gives you just what you would expect from the manual step as shown in Pinnell. In other words there is no enhancement found in the claimed step. The claimed scoring step only provides automating the manual activity. The end result is the same as compared to the manual method. A computer can simply iterate the steps faster. The result is the same. It would have been obvious

to a person of ordinary still in the art at the time of the invention to automate the determination of the factor score because this would speed up the process of matching policies with customers, which is purely known, and an expected result from automation of what is known in the art.

As per **claim 13**, Pinnell teaches factor analysis is used to summarize and combine attributes of a brand based on correlations of the attributes. The factor analysis is used to construct maps. The attribute importance is factor analyzed and then factor scores are created for each product. Although Pinnell does not explicitly teach means for determining factor scores of each brand and/or vehicle for each factor of the plural factors, and, in a coordinate system in which the plural factors are taken to be axes with the origin taken to be the factor score = 0, and the factor score of each brand and/or vehicle for each factor is expressed as a distance from the origin along the factor axis, means for generation of the angles formed between coordinate points determined by the factor scores of each brand and/or each vehicle, and factor axes. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a mathematical representation of the factor score determined from the factor analysis, as it is well known that a mathematical representation of brand evaluation is old and well known in the art of market analysis. The mathematical representation would allow for an better understanding of how each brand relates to each other based on the position from the vector axis.

It was also known at the time of the invention that merely providing an automatic means to replace a manual activity which accomplishes the same result is not sufficient to distinguish over the prior art, *In re Venner*, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958). For example, simply automating the steps of determining factor scores of each brand and /or vehicle gives you just what you would expect from the manual step as shown in Pinnell. In other words

there is no enhancement found in the claimed step. The claimed scoring step only provides automating the manual activity. The end result is the same as compared to the manual method. A computer can simply iterate the steps faster. The result is the same. It would have been obvious to a person of ordinary still in the art at the time of the invention to automate the determination of the factor score because this would speed up the process of matching policies with customers, which is purely known, and an expected result from automation of what is known in the art.

· As per **claim 14**, Pinnell teaches factor analysis is used to summarize and combine attributes of a brand based on correlations of the attributes. The factor analysis is used to construct maps. The attribute importance is factor analyzed and then factor scores are created for each product. Although Pinnell does not explicitly teach means for generation of distances between coordinate points and/or distances between coordinate points and the origin, It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a mathematical representation of the factor score determined from the factor analysis, as it is well known that a mathematical representation of brand evaluation is old and well known in the art of market analysis. The mathematical representation would allow for an better understanding of how each brand relates to each other based on the position from the vector axis.

It was also known at the time of the invention that merely providing an automatic means to replace a manual activity which accomplishes the same result is not sufficient to distinguish over the prior art, *In re Venner*, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958). For example, simply automating the steps of determining factor scores of each brand and /or vehicle gives you just what you would expect from the manual step as shown in Pinnell. In other words there is no enhancement found in the claimed step. The claimed scoring step only provides

automating the manual activity. The end result is the same as compared to the manual method. A computer can simply iterate the steps faster. The result is the same. It would have been obvious to a person of ordinary still in the art at the time of the invention to automate the determination of the factor score because this would speed up the process of matching policies with customers, which is purely known, and an expected result from automation of what is known in the art.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Frost, US 5,041,972 – method of measuring and evaluating consumer response for the development of consumer products

Ghose, Sanjoy – "Distance representations of consumer perceptions: Evaluating appropriateness by Using Diagnositcs"

8. This Office action has an attached requirement for information under 37 C.F.R. § 1.105. A complete response to this Office action must include a complete response to the attached requirement for information. The time period for reply to the attached requirement coincides with the time period for reply to this Office action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Johnna R Stimpak whose telephone number is 703-305-4566. The examiner can normally be reached on M-F 8am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 703-305-9643. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JS
1/24/05

TARIQ R. HAFIZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600

37 CFR § 1.105 - Requirement for Information

Applicant and the assignee of this application are required under 37 CFR 1.105 to provide the following information that the examiner has determined is reasonably necessary to the examination of this application.

The information is required to extend the domain of the search for prior art. Limited amounts of art related to the claimed subject matter are available within the Office, and are generally found in class 705 and subclass 10, which describe market analysis. A broader range of art to search is necessary to establish the level of knowledge of those of ordinary skill in the claimed subject matter art of evaluating proximity of a brand and/or vehicle.

The fee and certification requirements of 37 C.F.R. § 1.97 are waived for those documents submitted in reply to this requirement. This waiver extends only to those documents within the scope of this requirement under 37 C.F.R. § 1.105 that are included in the applicant's first complete communication responding to this requirement. Any supplemental replies subsequent to the first communication responding to this requirement and any information disclosures beyond the scope of this requirement under 37 C.F.R. § 1.105 are subject to the fee and certification requirements of 37 C.F.R. § 1.97.

The applicant is reminded that the reply to this requirement must be made with candor and good faith under 37 CFR 1.56. Where the applicant does not have or cannot readily obtain an item of required information, a statement that the item is unknown or cannot be readily obtained will be accepted as a complete response to the requirement for that item.

The requirement is an attachment of the enclosed Office action. A complete response to the enclosed office action must include a complete response to this requirement. The time period for

reply to this requirement coincides with the time period for reply to the enclosed Office action, which is 3 months.

In response to this requirement, please provide the citation and a copy of each publication that any of the applicants relied upon to develop the disclosed subject matter that describes the applicant's invention, particularly as to developing the equation:

$$D_{ij} = [\alpha\{\sum_{k=1}^{n}(l_{ik}-m_{jk})^2\}+\beta(1-\cos\theta_{ij})^2]^{1/2} \quad (1)$$

For each publication, please provide a concise explanation of the reliance placed on that publication in the development of the disclosed subject matter.

TARIQ R. HAFIZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600